

Work Order ID 93314

\*93314\*

Page 1

November-15-12 11:36:24 AM

Item ID: D6101-017

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Saddle Billet

Start Date: 11/23/12 Start Qty: 10.00

\*10\*

Cust Item ID:

Required Date: 11/30/12 Req'd Qty: 10.00

\*10\*

Customer:

Reference:

Approvals: Process Plan: ML5 Date: 12-11-14 Tooling:

Date:

Run Start \*NR1\*

QC: Date: SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D6101

B

100

0.00

\*100\*

Purchasing

Purchasing

PURCHASING

Memo

Issue P/O:

18441

a) Description: Alluminum billet

b) 6.350" x 6.250" x 2.250" thick (+0.030 / -0.000)

c) Tolerance on all dimensions are +0.030/-0.000"

d) Grain direction along 6.350" length

e) Material: 7075-T7351 (QQ-A-250/12)

f) Material certification required

110

Receive & Inspect for Damage & Mat'l Certs

0.00

\*110\*

Packaging

Packaging

Memo

Ensure material certification is attached

CL 12/11/19 10

12/12/12 10

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

# Work Order ID 93314

**\*93314\***

Page 2

November-15-12 11:36:24 AM

Item ID: D6101-017

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Saddle Billet

Start Date: 11/23/12

Start Qty: 10.00

**\*10\***

Cust Item ID:

Required Date: 11/30/12

Req'd Qty: 10.00

**\*10\***

Customer:

Reference:

Run Start

**\*NR1\***

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop

**\*NR2\***

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

QC6- Inspect dimensions to drawing

0.00

*OK 12/12/10*

**\*120\***

QC

Memo

0.00

Quality Control

Ensure Material certification comply to Dwg D6101

*10*

*0*

130

Identify as per dwg & Stock Location: *MAT41*

0.00

*FK 12/12/10*

**\*130\***

Packaging

Memo

0.00

Packaging

*10*

*0*

140

QC21- Final Inspection - Work Order Release

0.00

**\*140\***

QC

Memo

0.00

Quality Control

*12/12/10*

*mf 12-12-10*

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

**FAULT CATEGORY**

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions  <input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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# Picklist Print

November-15-12 11:36:24 AM

Page 1

Work Order ID: 93314

Parent Item: D6101-017

Parent Item Name: Saddle Billet

Start Date: 11/23/12

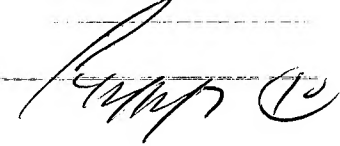
Required Date: 11/30/12

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP RevA: New issue DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-017P ALUM BILLET		Purchased	No			110	Each	0.0000	1	10			



NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

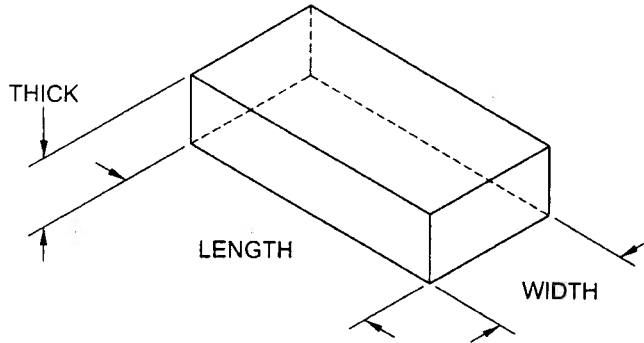
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Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

Landing Gear	General	Other
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		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

# SPECIFICATION CONTROL DRAWING



SHEET NO. 12-11-10  
 93314 MTS  
 UNCONTROLLED  
 REVISION NO.  
 12-11-10

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

**B** ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

**RELEASED**  
 09/07/15/W

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D6101	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	





**Castle Metals®**

A. M. Castle &amp; Co.

## BORDEREAU DE MARCHANDISES

Page 1 of 2

No de Formulaire d'Emballage / Shipment No:1565010

<b>Expédié de / Ship From:</b>		<b>Vendu à / Sold To:</b>		<b>Expédié à / Ship To:</b>		<b>Livré à / Deliver To:</b>	
A. M. Castle & Co. (Canada) Inc. MONTREAL - CASTLE METALS 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
<b>Date d'expédition / Date Shipped</b>	<b>F.O.B.</b>	<b>Modalités de transport / Freight Terms</b>		<b>Transporteur / Carrier</b>		<b>No du Bon de connaissance / BOL No</b>	
06-DEC-2012	ORIGIN	Prepaid		MANITOULIN		1565010-2	

<b>Détails d'expédition / Shipment Details</b>	<b>Destination finale / Final Destination Branch - MON</b>
--	--

N° de commande / Order No		N° de ligne Line No		N° d'article / Item No		Description		
2550929		3		750704.MO		2.2500.PL.7075.T7351.ALUMINUM.USI.48.5000.144.5000 CUT 2SIDED TO 6.25 IN ( ) X 6.35 IN ( ) SPECIFICATIONS: SHIP AS SOON AS REC'D QQ-A-250/12 GRAIN ALONG 6.35"		
N° de bon de commande / Purchase Order No		Nbre de pièces / Part Number		Qté commandée / Ordered Qty		Qté Facturée / Invoice Qty		
18441		YOUR ITEM NUMBER: D6101-017		10.00 PCS		10.00 PCS		
Détails / Details		SHIP AS SOON AS REC'D QQ-A-250/12 GRAIN ALONG 6.35"						
N° de livraison / Delivery No :		Usine / Mill	No de coulée / Heat Number	Code méc / Mech Id	Pièce s / PCS	Largeur (Pouce)/ Width (IN)	Longueur (Pouce)/ Length (IN)	Qté expédiée/ Shipped Qty(LBS)
118210764		MATERIALS TECHNOLOG Y	559918A8		6			55.1722



**Castle Metals®****BORDEREAU DE MARCHANDISES****A. M. Castle & Co.**

Page 2 of 2

118210764	SOLUTIONS MATERIALS TECHNOLOG Y SOLUTIONS	542286A0		4			36.7815
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Ces marchandises/technologies sont sujettes aux règlements de l'Export Administration et du département d'état des États-Unis. Si elles ont été/sont exportées, elles doivent se conformer à ces règlements. Toute modification du contrat de transport contraire aux lois des États-Unis est interdite.

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel, y compris toute spécification faisant partie de la description. Les rapports d'essai sont archivés pour fins de consultation. Toute requête concernant du matériel défectueux sera rejetée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co. dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Ce matériel a été reçu et inspecté par

Reviewed by Authorized Castle Metals Representative:

Date:

Name:



## SHIP TO:

HADCO METAL TRADING CO. LLC  
2811 CHARTER RD  
PHILADELPHIA, PA 19154

**KAISER**  
**ALUMINUM**

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

## SOLD TO:

HADCO METAL TRADING CO. LLC  
2811 CHARTER RD  
PHILADELPHIA, PA 19154

## CERTIFIED TEST REPORT

Serial Number  
4240821

CUSTOMER PO NUMBER: 028796		WORK PACKAGE:		CUSTOMER PART NUMBER:		SHIP RUN/LOAD: 102149/21		GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1120079	LINE ITEM: 9	SHIP DATE: 3-OCT-2011	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: Sawed Plate			
WEIGHT SHIPPED: 8826 LB	QUANTITY: 4 PCS EST.	B/L NUMBER: 2033946	GAUGE: 2.2500 IN		DIAMETER/WIDTH: 60.500 IN		LENGTH: 157.500 IN		

MHU 1529500: LOT 559918A8: 2 pieces;  
MHU 1529502: LOT 559918A8: 2 pieces;

## Certified Specifications

AMS 4078/RevH  
ASTM B 209/Rev07  
BSS 7055/RevA  
GAMPS 9101/RevB  
PS 21211/RevL

AMS-QQ-A-250/12  
ASTM B 594/Rev06  
CSTI 006/RevD  
GSS1810C/RevG/Amd1

AMS-STD-2154/Rev98  
BAC 5439/RevH  
DPS 4.713/RevAH  
MMS 159/RevP

Test Code: 4297

## Test Results

Lot: 559918A8 Cast 414 Drop 30 Ingot 3 Melted in USA

(ASTM E8/B557)  
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.2 : 72.1 (491 : 497)	59.6 : 61.4 (411 : 423)	11.0 : 11.4

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS:	41.4 Min	41.9 Max
(MS/M):	24.0 Min	24.3 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.08	0.18	1.4	0.02	2.5	0.20	5.8	0.03	0.01	0.01	TOT 0.05

Castle Metal Mtn

HEAT NUMBER 559918A8

MECHANICAL ID

ITEM CODE 750704-60

LOT NUMBER 2796397 MON

PO NUMBER 17423

RECEIPT DATE 12-5-12

SUPPLIER MTR

SPECIFICATION AMS-QQ-A-250/12

LCS

COMMENT

APPROVED



# KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

## CERTIFIED TEST REPORT

Serial Number  
4240821

### ALLOY LIMITS

7075	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

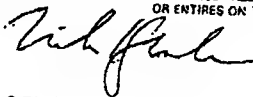
Aluminum Remainder

### TEST NOTES

Metal represented by this test report was 100% immersion ultrasonically tested from one side and meets the Class A and Class B requirements of all specifications referenced on this test report.

### CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.872-1(a), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF DFARS 252.225 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN COMPLIANCE WITH THE REQUIREMENTS OF APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTIRE ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO 9001:2000 CERTIFIED.



MIKE KLOCKE, LABORATORIES SUPERVISOR





SHIP TO:  
SAMUEL BAIE D'URFE(SHIP TO)  
21525 CLARK-GRAHAM  
BAIE D'URFE, PQ, CA H9X 3T5

SOLD TO:  
SAMUEL LAVAL  
2225 FRANCIS HUGHES  
LAVAL, PQ, CA H7S1N5

**KAISER  
ALUMINUM**

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

# CERTIFIED TEST REPORT

Serial Number  
4227484

CUSTOMER PO NUMBER: C83588		WORK PACKAGE:	CUSTOMER PART NUMBER:		SHIP RUN/LOAD: 102060/1	GOVT CONTRACT NUMBER:
KAISER ORDER NO: 1114036	LINE ITEM: 5	SHIP DATE: 26-MAY-2011	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: Sawed Plate
WEIGHT SHIPPED: 11222 LB	QUANTITY: 7 PCS EST.	B/L NUMBER: 2032191	GUAGE: 2.2500 IN	DIAMETER/WIDTH: 48.500 IN	LENGTH: 144.500 IN	

## Certified Specifications

AMS 407B/RevH  
ASTM B 209/Rev07  
BSS 7055/RevA  
DPS 4.713/RevAH  
GSS16100/RevG/Amd1

AMS-QQ-A-250/12  
ASTM B 594/Rev06  
CMMP 025/RevT  
EAC MS1011/RevE  
MMS 159/RevN

AMS-STD-2154/Rev98  
BAC 5439/RevH  
CSTI 006/RevD  
GAMPS 9101/RevB  
PS 21211/RevK

Test Code: 4297

## Test Results

Lot: 542286A0 Cast 386

Drop 57

Ingot 4

Melted in USA

(ASTM E8/B667)  
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.4 : 73.3 (492 : 505)	60.2 : 62.9 (415 : 434)	12.1 : 12.9

(ASTM E1004)  
(EN 2004-1)

Conductivity %IACS:	41.1 Min	41.5 Max
(MS/M):	23.8 Min	24.1 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.09	0.17	1.5	0.03	2.4	0.20	5.7	0.03	0.01	0.02	TOT 0.04

## Castle Metals Men

HEAT NUMBER 542286A0  
MECHANICAL ID                       
ITEM CODE 750704 Bo  
LOT NUMBER 2796401 MON  
PO NUMBER 17423  
RECEIPT DATE 12-5-12  
SUPPLIER MTR  
SPECIFICATION AMS-QQ-A-250/12  
LCS                       
COMMENT                       
APPROVED                     

DAS 14 12/12/10 9:38



# KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

## CERTIFIED TEST REPORT

Serial Number  
4227484

Lot: 542371A0 Cast 386

Drop 58

Ingot 4

Melted in USA

(ASTM B8/B557)  
(EN 2002-1)

Tensile: Temper  
T7351

Dir / # Tests  
LT / 2 (Min:Max)

Ultimate KSI (MPa)  
72.1 : 73.1  
(497 : 504)

Yield KSI (MPa)  
81.0 : 82.1  
(421 : 428)

Elongation %  
12.2 : 13.2

085221 - 22

(ASTM E1004)  
(EN 2004-1)

Conductivity %IACS:  
(MS/M):

40.9 Min  
23.7 Min

41.3 Max  
24.0 Max

(ASTM E1251)

Chemistry:  
Actual

SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
0.08	0.15	1.4	0.03	2.5	0.20	5.6	0.02	0.01	0.02	TOT 0.03

### ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075												
MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	8.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

### ORDER COMMENTS

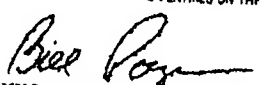
MAX HEIGHT 12" SKIDDED

### TEST NOTES

Metal represented by this test report was immersion  
ultrasonically tested from one side and meets the Class A  
and Class B requirements of all specifications referenced  
on this test report.

### CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.872-1(a), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF DFARS 252.228 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORT'S SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW: ISO 9001:2000 CERTIFIED.

  
BILL POYNOR, LABORATORIES SUPERVISOR

Page 2 of 2